RAILWAY MODELLER

AUGUST 1997

£1.80

For every BRITISH RAILWAY enthusiast

Watching the trains at Aberhafren

LSWR G6 0-6-0T drawings

Class 08s in close-up

LET SUMMER DREAMS LEAD YOU TO FALL LAYOUT REALITIES!

Design or choose a layout now and you'll be ready to build your dream layout this Fall! Atlas has the tools that will help you.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

If you'd like to choose from 34 time-tested layout plans...

ATLAS' SERIES OF LAYOUT INSTRUCTION BOOKS

Four HO and two N scale layout books give you the plans and building instructions to create a total of 34 pre-designed and tested layout plans. Each layout is accompanied by a complete list of all materials and products necessary to complete the railroad. Pick one you like and you're ready to build!

[illegible]

[illegible]

If you'd like to design a layout from scratch...

ATLAS' RIGHT TRACK SOFTWARE PROGRAM (for PC)

With this popular layout planning software, the layout possibilities are endless!

Getting started is easy: just "draw" a layout table in any shape or size, then place and connect Atlas HO and N scale sectional and Super-Flex® track, switches and bridges. Add some Atlas buildings and structures from other manufacturers, place your electrical components, add some wire and your layout is complete! Print out a list of materials you need, take it to your local hobby shop and you're one step closer to making the layout of your dreams become a reality.

Software includes a manual with a tutorial and free technical support by phone, fax or e-mail. Try the software today for **FREE!** Download a demo version from www.atlasrr.com (under the SOFTWARE heading). E-mail questions to support@atlasrr.com

See your Atlas retailer or clip & mail coupon below.

○ **Right Track Software** - [illegible]

○ **1997 Catalog** [illegible]

Name: ____________________

Address: ____________________

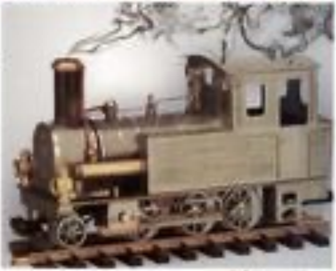
City/State/Zip: ____________________

Mail to: ATLAS, [illegible]

Atlas Books ○ [illegible]

[illegible]

Announcing! New! Wilesco
LUCAS SPREEWALD LOCOMOTIVE
Affordable Easy-to-build Live Steam Locomotive



[illegible]

[illegible]

LUCAS TANK LOCOMOTIVE SPREEWALD SPECIFICATIONS:

[illegible]

☑ **LUCAS SPREEWALD LOCOMOTIVE KIT** [illegible]
☑ **OPTIONAL GAS PRESSURE REGULATING VALVE** [illegible]
Shipping and handling [illegible]
GRAND TOTAL $____

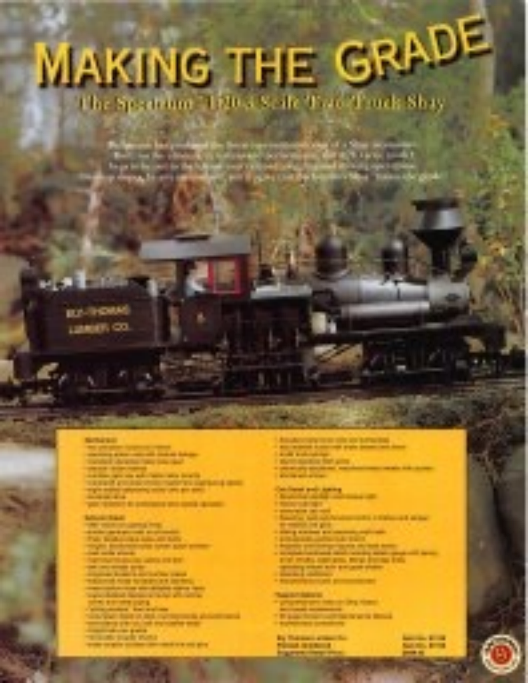
[illegible]

DIAMOND ENTERPRISES AND BOOK PUBLISHERS
DIVISION OF YESTERYEAR TOYS & BOOKS INC
[illegible] Alexandria Bay, NY [illegible]
1-800-481-1353 [illegible]

MAKING THE GRADE

The Spectrum 1:20.3 Scale Two-Truck Shay

[illegible] makes the grade.


ELY-THOMAS
LUMBER CO.

[illegible]

TOP FROG - VOLUME 4

THE BEST OF PASSENGER TRAINS - EAST

ORDER TOLL-FREE
1-800-227-1336

[illegible] **Best of Passenger Trains-West.** [illegible] **Green Frog** [illegible] **Volume 4** [illegible] **Top Frog** [illegible] **Emery Gulash.** [illegible] **Emery Gulash** [illegible]

Volume 4 [illegible] **the early 50's into the 70's** [illegible] **New York Central, Pennsylvania Railroad, Erie Lackawanna, Monon, Missouri Pacific, CB&Q, C&NW, B&O,** [illegible] **Central, C&O & Milwaukee Road, Penn Central, and Grand Trunk.**

[illegible] **Emery Gulash** [illegible] **Green Frog** [illegible]

[illegible] **minutes, STEREO HI-FI sound...** [illegible] **ORDER TAPE** [illegible] **VHS ONLY**

[illegible] **Order Toll Free! 1-800-227-1336**

GREEN FROG PRODUCTIONS

When only the best is good enough

Peco Setrack has an excellent reputation for detail, [illegible] and reliability, and is the first choice for both experienced railway modellers and beginners, enabling many exciting configurations to be incorporated into your plans. For ideas and help when planning your layout buy from your local model shop the comprehensive OO/HO Setrack Planbook, only [illegible]

[illegible]

For more detailed information on these and our other products see our full colour catalogue

PECO SETRACK PRITCHARD PATENT PRODUCT CO. LTD., BEER, DEVON, EX12 3NA ENGLAND

FEATURES

338
[illegible]

340
[illegible]

346
[illegible]

348
[illegible]

352
[illegible]

354
[illegible]

356
[illegible]

358
[illegible]

362
[illegible]

364
[illegible]

366
[illegible]

369
[illegible]

372
MODEL TOWNSCAPES IN THE GARDEN
[illegible]

373
[illegible]

374
READERS' LETTERS

375
LATEST RELEASES

376
BOOK REVIEWS

379
[illegible]

382
SOCIETIES & CLUBS

Coming next month Out 22 August

[illegible]

[illegible]

01287 [illegible]

THE CREATIVE HOBBY OF TODAY · IT'S FUN

EDITORIAL

Katie Goes Foaming

[illegible]

[illegible]

> Let's say you took an innocent bystander, stuck that person in a rented van with three hard-core railfans . . .

[illegible]

[illegible]

RailNews

[illegible]

Publisher: [illegible]

Editor: [illegible]

[illegible]

(800) 210-2211

[illegible]

Overland Has A Model For You!

OMI has a wide variety of cabooses, maintenance-of-way equipment, passenger cars and replacement motors to offer. Each of our models has all the details and smooth operation you've come to expect from Overland Models and our new motors from China are great for powering or repowering your models. Stop by your friendly Overland dealer today to check out these and all of the other fine handcrafted brass models by Ajin Precision of Korea.

HO

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Overland Models, Inc.

[illegible]

Industry news

Engines & Rolling Stock

[illegible]

Track

[illegible]

Bridges & Buildings

[illegible]

[illegible]

[illegible]

Accessories & Details

[illegible]

[illegible]

[illegible]

[illegible]

Electronics

[illegible]

[illegible]

[illegible]

Systemfine

WE'RE SHIPPING N-SCALE DECODERS!

WANGROW ELECTRONICS, INC.

OMI "HO" Motors

IN 1945, E7 LOCOMOTIVES SET THE STANDARD FOR PASSENGER DIESELS.

TODAY, LIFE-LIKE CONTINUES THE TRADITION.

WE BUILD THEM THE WAY THEY USED TO.

[illegible]

KATY MODEL
RAILROAD SUPPLY
PO Box [illegible]
Katy, Texas [illegible]

Card

[illegible]

$3

[illegible]

14th National Garden Railway Convention
July 7–12, 1998
Santa Clara Convention Center, Santa Clara, California

[illegible]

General Registration
[illegible]

Commercial Registration
[illegible]

Convention Chairperson
[illegible]

14th National Garden Railway Convention
[illegible]

Industry news | continued

[illegible]

Books & Videos

[illegible]

Miscellaneous

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

LGB Telegram. [illegible]

[illegible]

4" Metal Cutting Lathe

Over 25,000 Sold
2-Year Warranty

Ball-bearing spindle, many additional accessories available. Price as shown at left: [illegible]

TAIG TOOLS
12419 E. Nightingale Lane
Chandler, AZ 85286
(602) 895-6978

TRAINS & MORE

Your new source for personalized service from the people who know outdoor railroading.

Call us last before you buy. We carry:

[illegible]

LGB AUTHORIZED RETAILER

Plus...

we are proud to carry LOCOLINE products.
And, we'll install LOCOLINE in your locos. That['s] [illegible] guaranteed!
We also carry a wide variety of diesel and steam sounds!
If you don't see a product in our ad - call.
We carry other product lines & can get them for you!

Call today for a list of the products we carry!

[illegible]

[illegible]

HO scale

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

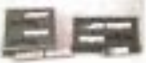
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

HO MODEL RAILROAD
DECALS
Modern Prototype Decals
[illegible]
MILLER ADVERTISING
[illegible]

SOUND ADVICE.
[illegible]

[illegible]

[illegible]
SOUNDTRAXX
[illegible]

"HO" SCALE
TAXI CAB
[illegible]

ONLY $8.95 EACH
[illegible]
[illegible]

[illegible]

STANDARD GAUGE

[illegible]

Clover House

Software for Inventory & Operation

[illegible]

[illegible]

ORANGE BLOSSOM HOBBIES

[illegible]

N-scale freight cars: [illegible]

[illegible]

[illegible]

[illegible]

N-scale

[illegible]

[illegible]

[illegible]

[illegible]

WELCOME TO RIDGE ROAD STATION!

Come visit with Peter & Janet Mills, the friendliest stop on the line!

Full line of G-Scale accessories!

Ridge Road Station

L·G·B

16035 Ridge Rd. W., Holley, NY 14470 (716) 638-6000 Fax (716) 638-7329

[illegible]

MIX & MATCH

Eldorado Railways in conjunction with Lone Star Bridge are expanding to offer customer service at a higher level. The versatility of Eldorado's Flex-Span Trestle System – along with the various styles and lengths of bridges from Lone Star – now offers a unique approach to your bridging needs. This exciting concept allows you, for the first time, to have a prototypically common combination of a bridge with a trestle approach on either or both ends. These products are handcrafted and design-scaled for 1:24, 1:22.5, and 1:20.3 rolling stock. Contact either Eldorado Railways or Lone Star Bridge and Abutment today for more details.

1278 A-B Colorado Lane
Arlington, TX 76015

ELDORADO RAILWAYS

817-548-5656 // 503-666-3477

[illegible]

Mountain Modelcraft
[illegible]

4, 3, 2, 1...
[illegible]

BEST VALUE
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

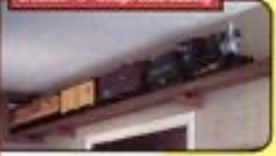
[illegible]

WALL-TRAK SYSTEMS

Creative "G" Gauge Railroading

Ideally suited for:
Homes ▪ Offices ▪ Restaurants
Condos ▪ Apartments
Many options for limited space!

WALL TRAK™ Features:
- Made in USA
- Solid Oak, furniture grade finish
- Accommodates LGB Track 1100, 1500, 1600 radius
- Available O Gauge O-72, O-80 Dual Mainline
- Wall mounted design with ceiling or wall suspension options
- User friendly with basic tools
- Guard rail options for commercial application or earthquake areas
- Standard Walnut Finish, Custom finish, or Unfinished



Average Cost $21 to $31 per foot— Includes all materials
Descriptive Literature Pack— $5.00 refundable with order
Track Planning Kit & Video— Beautifully depicted planning, installation & train operations—$45 refundable with order

WALL TRAK™ Systems • 2511 University Blvd., Houston, TX 77005 • (713) 521-4587
http://www.your-engineer.com

TOY TRAIN HEAVEN

[illegible]

FOR ORDERS CALL [illegible]

GREAT MODEL RAILROADS™, VOL. 26

From the Original Producer
of Model Railroad Videos.

[illegible]

Bob Hayden Allen Keller

[illegible]

Allen Keller Productions

[illegible]

Dealers Welcome

FOR ORDERS CALL [illegible]

PRODUCT NEWS

[illegible]

[illegible]

[illegible]

Large scales

[illegible]

Multiple scales

[illegible]

[illegible]

[illegible]

HO scales

[illegible]

[illegible]

[illegible]

Corrections

[illegible]

In the news

[illegible] ■

Chief

Run your trains, not your track! Realistic multi-train operation without blocking or computers!

[illegible]

NICHOLAS
SMITH TRAINS

[illegible]

WILLIAMS ELECTRIC TRAINS

[illegible]

LIONEL (O SCALE)

[illegible]

LIONEL (CONTINUED)

[illegible]

LGB

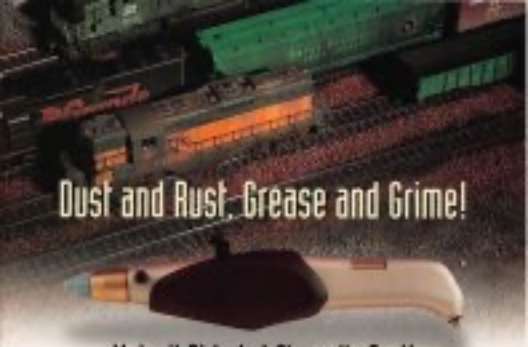
[illegible]

Fatal refreshments

[illegible]

[illegible]

[illegible]


Dust and Rust, Grease and Grime!

Make it Dirty but Clean-Up Fast!

[illegible]

[illegible]

[illegible]

Maximum Control, Precise Detail

[illegible]

Lightweight Comfort, Heavyweight Durability

[illegible]

Choose from Several Aztek Models

[illegible]

Visit your local hobby shop today.

[illegible]

www.testors.com

AZTEK

Elements of design: vertical space in the garden railroad

[illegible]

W[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Off the KATO drawing board and on to your layout.

PRECISION RAILROAD MODELS

HO Scale EMD SD45 From KATO

Roadname	Paint Scheme	Engine #	Item #
CP Rail System	CP Red with Flags	5490	37-1701
CP Rail System	CP Red with Flags	5494	37-1702
CP Rail System	CP Red with Flags	No #	37-1703
Erie Lackawanna	Maroon and Grey	3613	37-1704
Erie Lackawanna	Maroon and Grey	3622	37-1705
Erie Lackawanna	Maroon and Grey	No #	37-1706
Reading	Bee Line Service	7601	37-1707
Reading	Bee Line Service	7602	37-1708
Reading	Bee Line Service	No #	37-1709
Santa Fe	Blue and Yellow Warbonnet	5300	37-1710
Santa Fe	Blue and Yellow Warbonnet	5428	37-1711
Santa Fe	Blue and Yellow Warbonnet	No #	37-1712
Southern Pacific	Bloody Nose	7500	37-1713
Southern Pacific	Bloody Nose	7514	37-1714
Southern Pacific	Bloody Nose	No #	37-1715
Union Pacific	Dependable Transportation	3600	37-1716
Union Pacific	Dependable Transportation	3622	37-1717
Union Pacific	Dependable Transportation	No #	37-1718
Wisconsin Central	Maroon and Yellow	6582	37-1719
Wisconsin Central	Maroon and Yellow	6585	37-1720
Wisconsin Central	Maroon and Yellow	No #	37-1721
Undecorated	———	———	37-1700

KATO Quality Inside and Out • Factory-Installed DCC Socket

Expected Delivery to Retail Hobby Stores in August

KATO U.S.A., INC. 100 Remington Road · Schaumburg, IL 60173

Garden railway basics | [illegible]

Temporary garden railroading

[illegible]

[illegible]

Practice makes perfect

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Building a temporary garden railway

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

NORTHEAST NARROW GAUGE

RANGELEY

P.O. Box 191, Wiscasset, Maine 04578

PEARSE "NEVADA"
Introducing the new Gauge "1"
Live Steam Locomotive
It's Exciting!

WE CARRY A COMPLETE LINE
OF LIVE STEAM LOCOMOTIVES
& PARTS BY
ASTER, LEGEND,
PEARSE & ROUNDHOUSE

U.K. LIVE STEAM LOCOMOTIVES
3 1/2" to 7 1/2" gauges.
Send $5.00 for Cat. [illegible]

RIO PECOS
GARDEN RAILROAD CO.

MODEL TRAINS & MORE

SPECIALIZING
in products from

[illegible]

and much more!

"Our #1 PRIORITY is
to provide the
best service possible."
So call or stop by
"the small town hobby store
with the big city look."

[illegible]

[illegible]

GARDEN TEXTURE

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

EUROPEAN MODEL TRAINS

[illegible] We carry **Brawa, Fleischmann, Liliput, Lima, Märklin, Rivarossi, Roco, Trix, etc.**

[illegible]

FUNCTIONAL HO-GAUGE DIGITAL BREAKAWAY CRANE!!! AVAILABLE IN BOTH 2-RAIL DCC AND MÄRKLIN 3-RAIL DIGITAL. *Simply Incredible!!!!*

[illegible]

NEW 1997 ITEMS! Special of the month [illegible] the 150 Year Anniversary of the Swiss Railroads!!
Swiss Steam Locomotive Class C5/6 "Elephant"

[illegible]

NEW 1997 ITEMS! Special of the month [illegible] Heavy Freight Locomotive!!

[illegible]

VISIT US AT THE NMRA SHOW AUGUST [illegible]

[illegible]

REYNAULD'S EURO-IMPORTS, INC.

RATIO

Ratio Plastic Models

FEATURE OF THE MONTH

12v VARIABLE SPEED DRILL KIT

Ideal for Model Building and all Precision Work

MINICRAFT

Precision Tools for the Professional

RAILWAY MODELLER

[illegible]

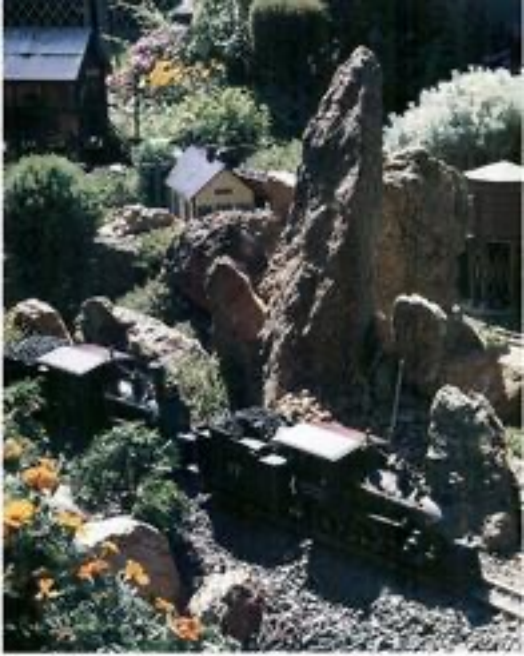
[illegible]

CONTINENTAL MODELLER

[illegible]

LARGER SCALES ANOTHER WORLD

[illegible]



What Makes A Great Garden Railway?

[illegible]

The Colorado Midland Railway

[illegible]

[illegible]

T[illegible]

[illegible]

[illegible]

[illegible]

> "Trying to be competitive can be a costly adventure with no reward"

[illegible]

The Colorado Midland

[illegible]

Centers of interest bring a garden railway to life

[illegible]

[illegible]

Plants on the Colorado Midland

Perennial groundcovers

[illegible]

Miscellaneous perennials

[illegible]

Pond plants

[illegible]

Summer annuals

[illegible]

Spring bulbs

Crocus
Daffodil
Tulip

[illegible]

Things we'd like to see

[illegible]

[illegible]

[illegible]

> "Railroads improved their earlier classes of locomotives by updating them mechanically"

[illegible]

Big. Bold. Metal.
MAXI!
The 1:32 scale metal train from Märklin.
UNION PACIFIC

märklin
1470
1470
1470
MAXI
by Märklin, the world leader in model railroading.

MODELING MULTIPLE UNIT CARS

Part II

Modeling the Reading, Lackawanna and Illinois Central Railroad Cars in HO or S-Scale

By Vic Roseman

The Reading electrics at rush hour, circa 1970 at Spring Garden Street, Philadelphia, Pennsylvania. The device over the headlight was spring-loaded and provided electrical contact when one car was coupled to the next.

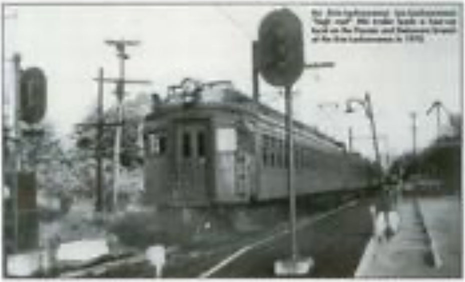
The self-powered passenger cars that derived their power from overhead wires or third rails are called MU or multiple-unit cars. They have been the mainstay of passenger commuter operations for decades, but there are no easy-build kits. Overland Models is, however, importing HO scale brass models of Lackawanna MU cars. Here are the easiest ways to model multi-unit cars and some information on how they operated. Part I, on modeling the Pennsylvania Railroad cars, appeared in the July 1997 issue of "The Journal."

I [illegible]

[illegible]

[illegible]

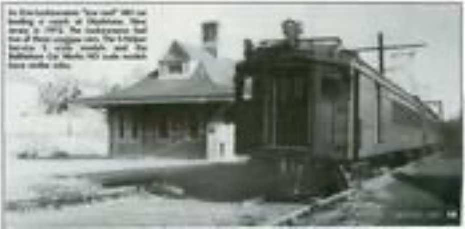
[illegible]



An Erie-Lackawanna [illegible] "high roof" MU trailer [illegible] on the Passaic and Delaware Branch of the Erie-Lackawanna in 1970.

[illegible]

[illegible]

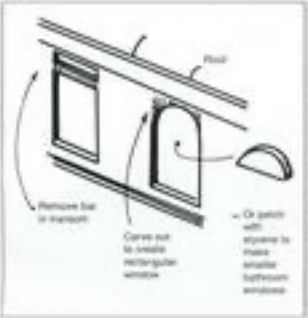


An Erie-Lackawanna "low roof" MU car leading a consist at Gladstone, New Jersey in 1970. The Lackawanna had [illegible] of these [illegible] cars. The [illegible] Service S scale models and the Bethlehem Car Works HO scale models have similar roofs.

MODELING MU CARS

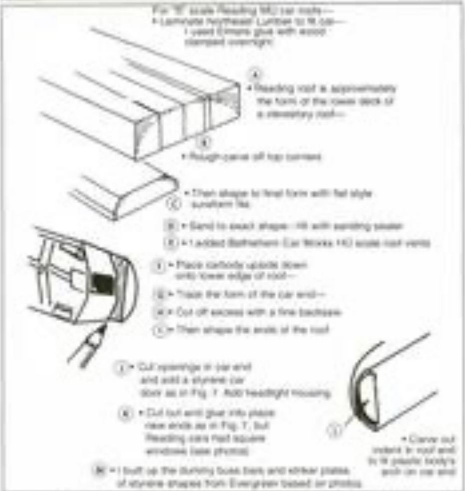
[illegible]

Window Modifications for HO scale [illegible] MU Cars


Roof
Remove bar in transom
Carve out to create rectangular window
Or patch with styrene to make smaller bathroom windows

[illegible]

Modeling Reading MU Car Roofs


For "S" scale Reading MU car roofs—
• Laminate Northeastern Lumber to fit car—
I used Elmer's glue with wood clamped overnight
A
• Reading roof is approximately the form of the lower deck of a clerestory roof—
B
• Rough carve off top corners
C
• Then shape to final form with flat style surform file
D
• Sand to exact shape—fill with sanding sealer
E
• I added Bethlehem Car Works HO scale roof vents
F
• Place carbody upside down onto lower edge of roof—
G
• Trace the form of the car end—
H
• Cut off excess with a fine backsaw
I
• Then shape the ends of the roof
J
• Cut openings in car end and add a styrene car door as in Fig. 7. Add headlight housing.
K
• Cut out and glue into place new ends as in Fig. 7, but Reading cars had square windows (see photos)
L
• Carve out indent in roof end to fit plastic body's arch on car end
M
• I built up the dummy buss bars and striker plates of styrene shapes from Evergreen based on photos

and the floor will snap into the groove in the plastic body sides.

[illegible]

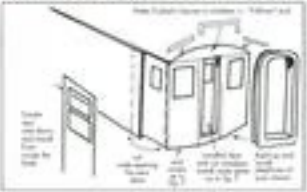
Lackawanna Cars

[illegible]

[illegible]

MODELING MU CARS

End and door details for Illinois Central MU Cars



[illegible]

[illegible]

[illegible]

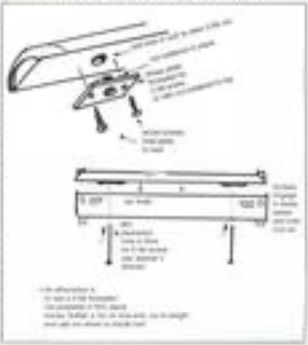
Illinois Central MU Cars

[illegible]

By 1972 many cars were reconditioned and modernized with air conditioning. These cars were known as the "Blue and White" cars for their paint scheme. [illegible] Reading [illegible] Philadelphia.

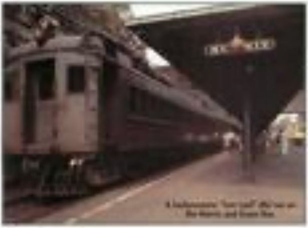
[illegible]

Fitting a Removable Wood Roof



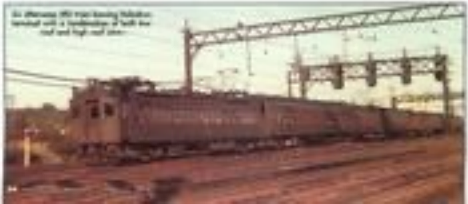
Modeling MU Cars

The Reading's Philadelphia terminal in [illegible]



A Lackawanna "low roof" MU car on the Morris and Essex line

Except for the Reading cars, all of the MU cars in these articles have to be scratchbuilt or kitbashed. [illegible]



An afternoon MU train leaving Hoboken terminal with a combination of both low roof and high roof cars

An O scale model of the Reading's single-car MU lined up as it would appear along many of Philadelphia's single-track electrified branches.

Another Lackawanna "box cab" MU car [illegible] Jersey City and Hoboken.

All about turnouts

Terminology, types, and troubleshooting

BY JIM HEDIGER
PHOTOS BY [illegible]

T[illegible]

[illegible]

"[illegible]" [illegible]

Terminology

[illegible]

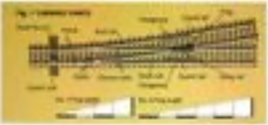


Fig. 2 TURNOUT CONSTRUCTION. [illegible]

[illegible]

[illegible]

Curved or angled?

[illegible]

[illegible]

Electrical characteristics

[illegible]

[illegible]

[illegible]

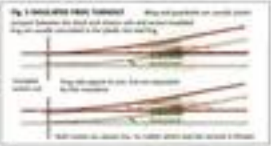


Fig. 3 INSULATED-FROG TURNOUT [illegible]

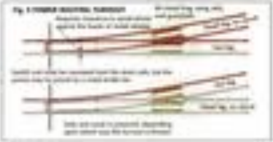


Fig. 4 POWER-ROUTING TURNOUT [illegible]

Troubleshooting

[illegible]

[illegible]

[illegible]

[illegible]

Fig. 5 NMRA GAUGE. [illegible]

Voices on the

rails

The coming of radio to America's railroads

BY JAMES ALEXANDER JR.

[illegible]

[illegible]

RENNERT, N.C., DECEMBER 16, 1943 — "Between 69 and 100 passengers were killed and more than 100 others were injured when two crack, streamlined trains of the Atlantic Coast Line Railroad were wrecked at 1:17 o'clock this morning in a [illegible] two miles north of Buie. More than half of the dead and injured in the accident, which seemed likely tonight to have proved more costly in human life than the wreck of the 'Atlantic Congressional Limited' in Philadelphia on Labor Day [illegible] were soldiers who were homeward bound on holiday leaves." —*New York Times*

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

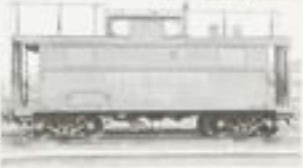
[illegible]

[illegible]

A simple technology

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

Rugged, inexpensive, and private

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Picking up interference

[illegible]

> In the prewar years, railroads continued to fear that radio equipment was too fragile and unreliable for the rough and tumble of daily operations.

[illegible]

The end of trainphone

[illegible]

"Trains & Trees" at Weston Nurseries—a toy store for adults!

[illegible] **Trains and Trees** at Weston Nurseries [illegible] in New England. From concept to complete design and installation, we'll help you build the railroad of your dreams. [illegible]

Featured in LGB Telegram

1998 New England Flower Show Gold Medalist

Authorized LGB Train Stop

[illegible] **Trains & Trees** at Weston Nurseries on Route 135 in Hopkinton, MA [illegible]

Ralph Williams Landscape Design [illegible]

Well, now that you've seen all the rest . . . it's time to take a look at the very best!

SystemOne

The Complete System . . . Everything you need to run your layout from one single source!

Starter Set [illegible]

For more information send a large self-addressed envelope to:

WANGROW ELECTRONICS, INC.

Innovations in Model Railroad Electronics

P.O. Box 98-[illegible] · Park Ridge, IL [illegible] · U.S.A.

Internet: http://www.wangrow.com • Email: [illegible]

Railway of the month

[illegible]

ABERHAFREN

Main line and steam shed in 4mm scale

A joint effort by members of the [illegible] Model Railway Group, Aberhafren mixes steam and early diesels in a scenic setting

[illegible]

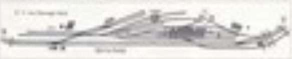
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

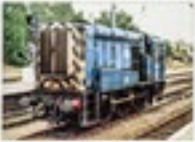
[illegible]

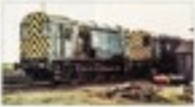
BR Class 08 details

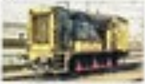
A photo survey for modellers

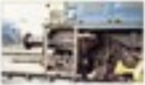
For many years Class 08s – [illegible] – have performed sterling service throughout the country. [illegible] presents a pictorial study of these fine locomotives.

[illegible]









[illegible]

[illegible]

[illegible]

[illegible]

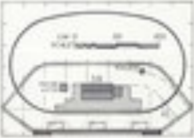
[illegible]

HATLEY

English LGB™

In order to provide his anglicised LGB™ Fantasy Models with a suitable operational setting, Outburne decided to build this characterful diorama.

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

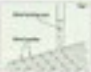
[illegible]

BUILDING LURGASHALL MILL

Structure modelling in 7mm scale

New Zealander [illegible] discusses the construction methods employed on this attractive building, destined for companion [illegible] layout

[illegible]

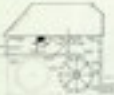


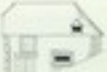
[illegible]

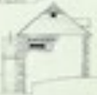
[illegible]

[illegible]

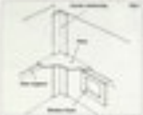
[illegible]





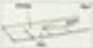


[illegible]



[illegible]

[illegible]



[illegible]

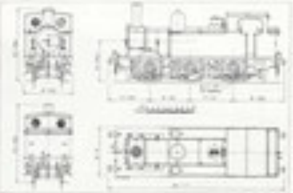
[illegible]

Scale drawings

LSWR ADAMS G6 0-6-0T

The sturdy locos drawn, described and modelled

[illegible]



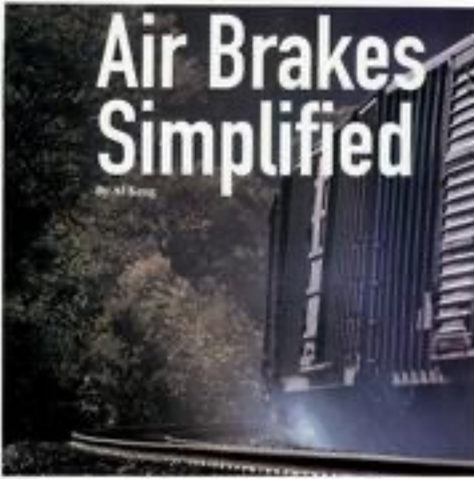
[illegible]

[illegible]

[illegible]

Air Brakes Simplified

By Al Krug



[illegible]

The work of the air brakes is revealed in the smoke pouring from the wheels of the eastbound Conrail train, [illegible] through the Berkshire mountains of western Massachusetts.

Here is a very simplified description of how North American freight train brakes work and some answers to other frequently asked questions.

[illegible]

[illegible]

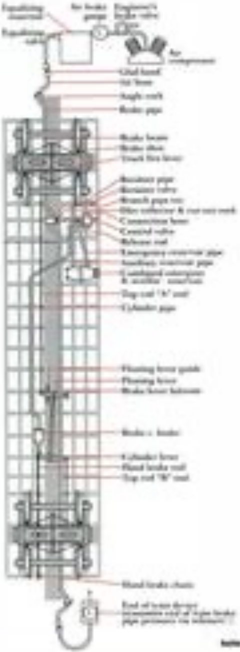
[illegible]

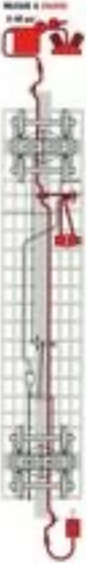
[illegible] through the [illegible] pipe. (This is why they are called [illegible] air brakes.)

Because air [illegible] from the car's reservoir [illegible] flows into the brake cylinders to force the brake shoes against the wheels, it is important to note that a train has no air brakes until each car's reservoir is [illegible] charged from the locomotive.

In other words, [illegible] on brakes.

There is nothing new about this system. It was invented by George Westinghouse in the late 1860s and first practically applied to passenger trains in 1869, to freight trains in 1887, and has been in use ever since with minor improvements.


Equalizing reservoir
Air brake gauge
Engineer's brake valve
Equalizing valve
Air compressor
Glad hand
Air hose
Angle cock
Brake pipe
Brake beam
Brake shoe
Truck live lever
Retainer pipe
Retainer valve
Branch pipe tee
Dirt collector & cut-out cock
Connection lever
Control valve
Release rod
Emergency reservoir pipe
Auxiliary reservoir pipe
Combined reservoirs & cylinder
Top rod "A" end
Cylinder pipe
Floating lever guide
Floating lever
Brake lever fulcrum
Brake [illegible]
Cylinder lever
Hand brake rod
Top rod "B" end
Hand brake chain
End of train device
(monitors end of train brake
pipe pressure via telemetry)



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Train Control

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

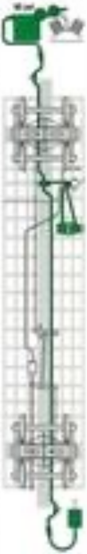
[illegible]

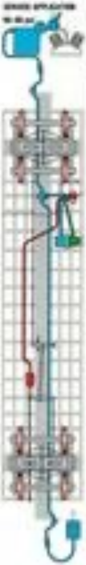
[illegible]

[illegible]

Freight Train Brakes

[illegible]


RELEASE & CHARGE
90 psi



[illegible]

ABOVE: Since air brakes are fail-safe with the reservoirs charged, this Canadian Pacific train came to a halt soon after these hoses separated and emergency valves were tripped in both directions, causing a full brake application throughout the train. LEFT: When braking effort is needed, the engineer reduces the pressure in the brake pipe through the brake valve; the control valve, sensing the pressure difference, then admits air to the brake cylinder and the brakes apply. ABOVE: Once the reservoir pressure decreases to equal the brake pipe pressure, the control valve returns to lap position, and the engineer's valve will lapse so that a constant pressure is maintained in the brake cylinder.

[illegible]

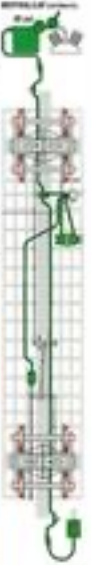
[illegible]

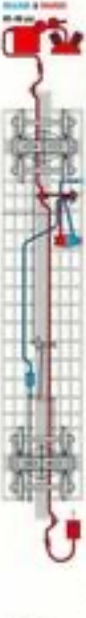
Controlling Slack

[illegible]

An Electronic Future

[illegible]




Release & Charge

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

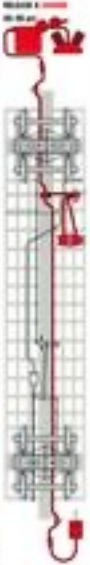
Retainers

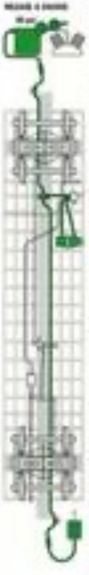
[illegible]

[illegible]

Empty/Load Sensors

[illegible]

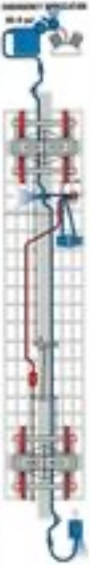




Equalizing Reservoir

[illegible]

[illegible]



ABOVE: Much as it has done for more than 100 years, the railroad air brake continues to slow and stop thousands of trains every day in North America. LEFT: If another application isn't made first, the pressure in the brake pipe and reservoirs returns to 90 psi, and the control valve returns to Lap. RIGHT: In an emergency application, the engineer lets a lot of air out of the brake valve, which triggers each car's emergency valve. This sharp reduction sends both reservoirs to the brake cylinder, resulting in maximum braking pressure, and vents brake pipe pressure to the atmosphere at each car. End-of-train devices are now designed to release the brake pipe pressure from the rear end so emergency applications happen quicker and without the risk of an obstruction in the line allowing only some brakes to apply.

[illegible]

BR transformer wagon

A heavy load carrier in 4mm scale

In this second article on Special Fleet wagons, the author turns to the dedicated Exceptional Load Carriers.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

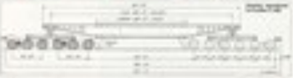
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

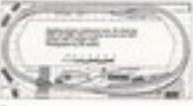
[illegible]

The Linkwood steam railway

Victorian steam in action

Just think of it – a large 0 gauge exhibition layout with no electrics whatsoever. 100% reliable and running on hot water

[illegible]



[illegible]

[illegible]

[illegible]

SIGNALS FOR THE MODELLER

An explanatory guide to train regulation

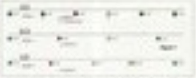
Unsure where to place signals on a layout, or what the terminology means? Read on

[illegible]

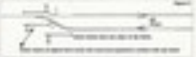
[illegible]

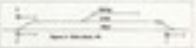
A little railway jargon

[illegible]



[illegible]





[illegible]

[illegible]

[illegible]

[illegible]

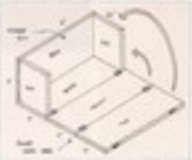
[illegible]

THE MODELLER'S MATE

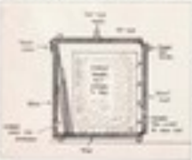
Portable storage for the modeller on the move

Richard shows you how a Modeller's Mate can provide a 'go anywhere' workspace

[illegible]



[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

45xx for N gauge

No suitable kit exists, so Frank improvised

In BR days, some of these versatile lightweights were auto-fitted, which widened further their suitability for the branch line modeller

[illegible]

[illegible]

The model

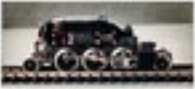
[illegible]

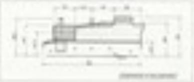
Chassis

[illegible]

[illegible]

[illegible]





[illegible]

[illegible]

A FORDSON RAIL TRACTOR

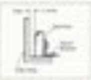
Building the Branchlines kit in 00

An ideal starter locomotive, the prototypes of which were widely used in industry

[illegible]

[illegible]

[illegible]



[illegible]

Above left: the completed loco. [illegible]

[illegible]

Plan of the month

O GAUGE ON A SHELF

Another small-space 7mm scale layout suggestion

This shelf layout provides another reason why the 'senior scale' need not be excluded automatically by modellers with little space.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

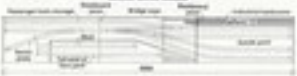
[illegible]

[illegible]

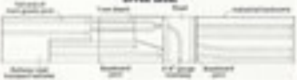
[illegible]

[illegible]

LOWER LEVEL [illegible]


Passenger train storage
Baseboard joint
Bridge over
Baseboard joint
Industrial backscene
Main
Goods yard

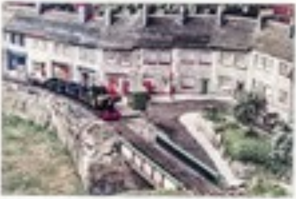
UPPER LEVEL


Tail end of front goods yard
Loco depot
Road
Industrial backscene
Baseboard joint
Baseboard joint

Model townscapes in the garden

Far from the Madding Crowd

A profile of [illegible], a very individual modeller



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Railfanning 101

by Karla [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Navigation on
the "Upper"
Mississippi River
Lock & Dam
No. 9
Lynxville,
Wisconsin

[illegible]

STUDENT MODELLER

Ideas and achievements from the younger generation

[illegible]

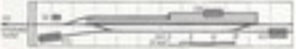
POUNDSVILLE

Small-space N gauge

A small Great Western terminus set in the 1930s, marking Michael's first venture into N

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

The term 'supercar' was coined in the '60s – Iain Robertson explains

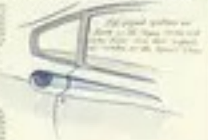
Super Cues

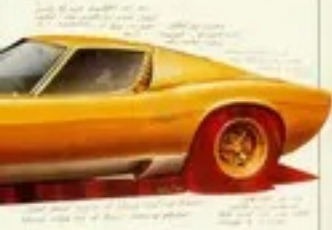
Iain Robertson, author of the sketches seen on here, is a highly respected creative stylist and car designer in his own right. He is also a motoring journalist and graphic artist who counts among his many achievements the styling of Caterham's first fully clothed road car, the 21

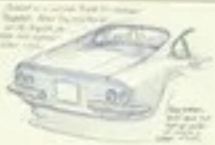
A [illegible]

the styling trends that define this era and finds one example that has it all

[illegible]



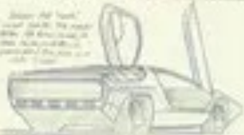


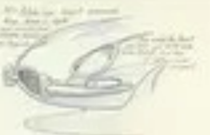


[illegible]

"…at supplies a combined performance and engineering innovation in exterior styling."

[illegible]

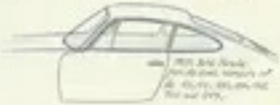




[illegible]

[illegible]

[illegible]



A turn for the better

[illegible]

WHEELS ON TEST

[illegible]

[illegible]

[illegible]

[illegible]

NASHUA, NEW HAMPSHIRE on the BOSTON AND MAINE RAILROAD

In HO Scale

By Charles Hermanns

Plan artwork by Craig Duttlee

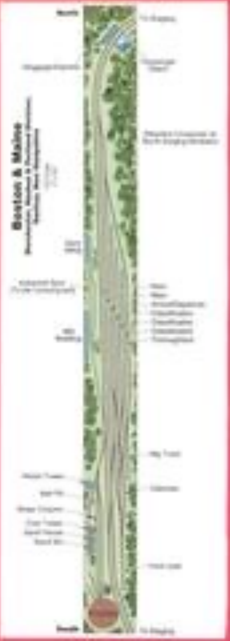
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

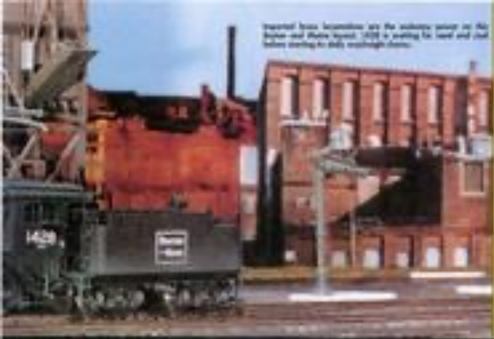

North
Boston & Maine
Main
Main
South

S[illegible]

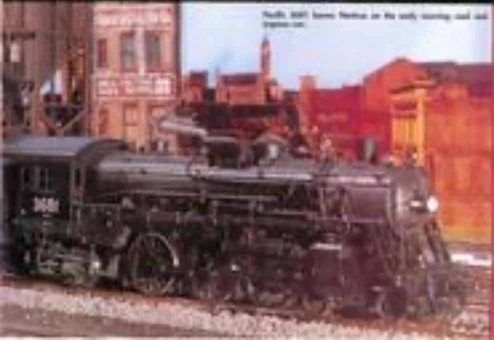
[illegible]

[illegible]

OILS, BELTING AND
MILL SUPPLIES



Imported brass locomotives are the mainstay power on the Boston and Maine layout. 1428 is waiting for sand and coal before starting its daily wayfreight chores.



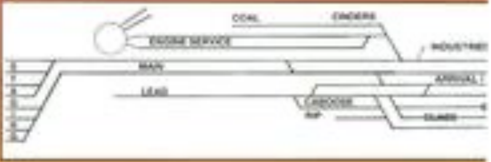
Pacific 3681 leaves Nashua on the early morning mail and express run.

[illegible]

[illegible]

[illegible]

THE NASHUA YARD SCHEMATIC


COAL
CINDERS
ENGINE SERVICE
INDUSTRI
MAIN
ARRIVAL
LEAD
CABOOSE
RIP

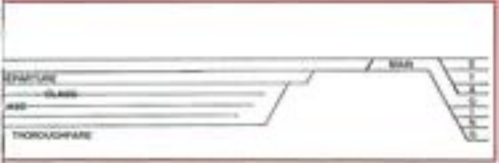
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]


EPARTURE
CLASS
ARD
THOROUGHFARE
MAIN

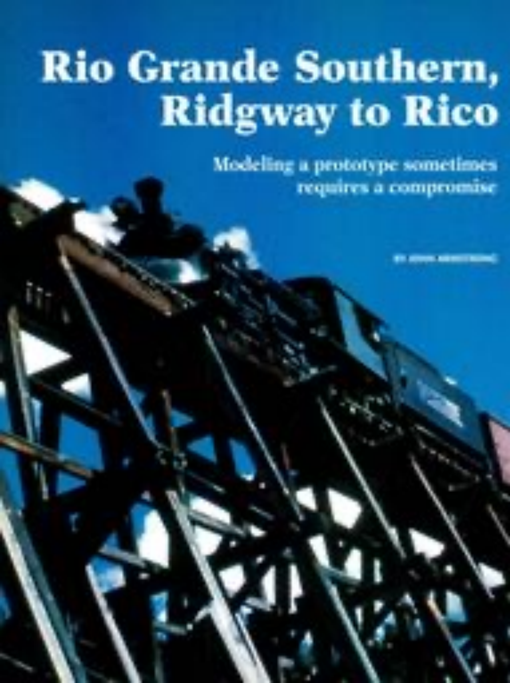
[illegible]

[illegible]

Rio Grande Southern, Ridgway to Rico

Modeling a prototype sometimes requires a compromise

BY JOHN ARMSTRONG



[illegible]

Above: [illegible]

Left: [illegible]

A [illegible]

[illegible]

[illegible]

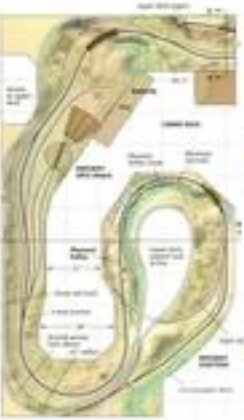
[illegible]

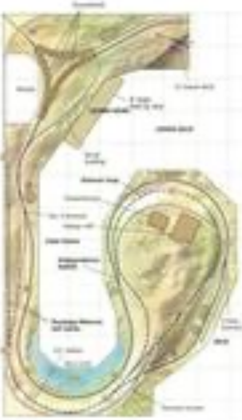
[illegible]

[illegible]

[illegible]

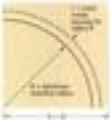
[illegible]





Figuring "squares"

[illegible]



[illegible]

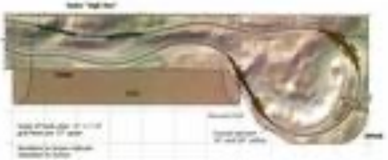
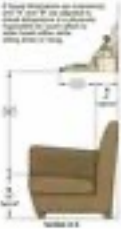
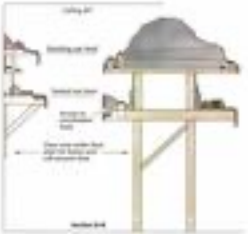
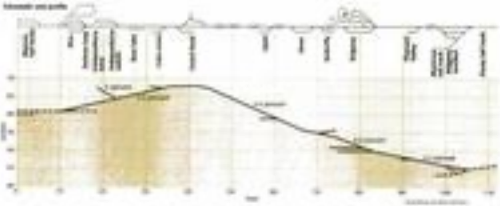


Fig. 1







[illegible]

[illegible]

[illegible]

[illegible]

Silver Streamliner

[illegible]

Silver Streamliner

[illegible]

"The Easy Way To Assemble & Disassemble Track"

[illegible]

Trackker

[illegible]

Automatically Perform Realistic Station Stops at all your Stations!

[illegible]

StationMaster

[illegible]

Chicagoland Garden R.R. Supply Inc.

New Address

[illegible]

See us for all your garden RR needs

[illegible]

ACCUCRAFT TRAINS

... MUSEUM QUALITY LARGE SCALE BRASS MODELS

American

4-4-0

Denver & Rio Grande

[illegible]

Delivery June 97

Also Available

South Pacific Coast

North Pacific Coast

South Pacific

Union Pacific

[illegible] OLD MIDDLEFIELD WAY · MOUNTAIN VIEW, CA [illegible] · USA

Tel: [illegible] · Fax: [illegible]

FLORIDA'S LARGEST
TRAIN STORE
A Model Railroader's Paradise

H&R TRAINS
[illegible]
LARGE SCALE TRACK
[illegible]
Celebrating our [illegible] year!
[illegible]
Phone (813) [illegible]
FAX (813) [illegible]
[illegible]
We Ship Worldwide

B&R
Railways
3450 E. So. Procyon
Las Vegas NV 89102
[illegible]
(702) 251-5787
Call toll free:
1-800-251-5787
Large selection
of Aristo-Craft
We carry all the great brands:
LGB · Märklin
[illegible] · Hartland · USA
Open Mon.-Sat. 10-6
[illegible]

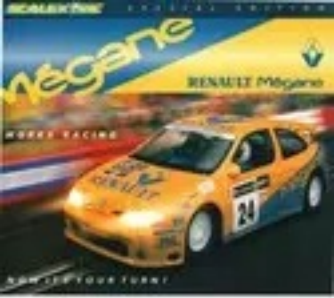
In the
SEPTEMBER
issue
CLASSIC TOY TRAINS
The Milwaukee Lionel Railroad Club at 50
Lionel postwar space & military trains
Photo contest winners
To get your copy of CLASSIC TOY TRAINS visit your local hobby shop or newsstand, or call
800-446-5489
Visit our web site at [illegible]
From the publishers of
Garden Railways

LARGE SCALE ENGINE & CAR
DECALS
&
LOCOMOTIVE & BUILDER
PLATES
- [illegible]
- [illegible]
- [illegible]

Catalog No 9
for Garden Railroads
[illegible]
ROBERT DUSTIN
GR-9
154 Auburndale Avenue
Newton, MA 02166

When responding to ads, please mention
Garden Railways

The ROBERTS' LINES 4-6-4 "[illegible]" Steam Locomotive
[illegible]
ROBERTS' LINES [illegible]
[illegible]
ROBERTS' LINES
[illegible]


SCALEXTRIC
SPECIAL EDITION
Mégane
RENAULT Mégane
WORKS RACING
24
NOW IT'S YOUR TURN!

[illegible]

[illegible]

[illegible]

[illegible]

Program your DCC Decoders with PR1 for DOS

by Larry Puckett

[illegible]

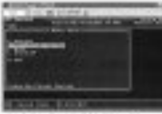


Figure 1 — [illegible]

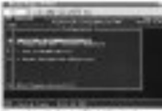


Figure 2 — [illegible]

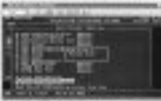


Figure 3 — [illegible]

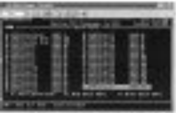


Figure 4 — Although it's possible to [illegible]

Figure 5 — The [illegible] programming menu allows you to load and save configuration from and to a file.

[illegible]

Documentation	[illegible]
User friendly	[illegible]
Technical	[illegible]
Application	[illegible]
Value	[illegible]
Total	[illegible]

[illegible]

SOFTWARE PRODUCERS: [illegible]

BOOK BEAT

by Doug Geiger, MMR

Sunset on the Rio Grande Southern...Volume I

by [illegible]
[illegible]
P.O. [illegible]
[illegible]
[illegible] hardcover

W[illegible]

[illegible]

Journeys Through Western Rail History...Colorado Rail Annual No. 22

Colorado Railroad Museum
P.O. Box [illegible]
Golden, CO [illegible]
[illegible] hardcover

T[illegible]

[illegible]

Commuter/Transit

[illegible]

[illegible]

BALTIMORE

Fare Cut

[illegible]

BOSTON

Commuter Rail Extension

[illegible]

CHICAGO

Speed Reduced

[illegible]

DALLAS

More LRT, Higher Ridership on Trinity

[illegible]

LOS ANGELES

Red Line Shakeup

[illegible]

MARYLAND

Expansion Announced

[illegible]

[illegible]

Railroad Pocket Watches
International Timekeepers
[illegible]

[illegible]

NEW JERSEY TRANSIT

Trains For Sale

[illegible]

NEW YORK

Best and Worst Subway Lines

[illegible]

PATH

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

SACRAMENTO

Ridership Record

[illegible]

40 COLOR POST
CARDS OF TRAINS

[illegible]

Service Printing Company

[illegible]

YOUR AMTRAK TICKET & TOUR SPECIALISTS

ACCENT ON TRAVEL

Call Ted or Sylvia Blahak to book your next Amtrak vacation.

1 800 347-0645

[illegible]

112 N. Fifth Street
Klamath Falls, Oregon 97601

[illegible]

[illegible]

SALT LAKE CITY

Construction Contract Awarded

[illegible]

SAN FRANCISCO

BART Opens New Line

[illegible]

SAN FRANCISCO

Municipal Railway's Logo Controversy

[illegible]

WASHINGTON, D.C.

More Service, Trains to Dulles

[illegible]

VANCOUVER

More SkyTrains

[illegible]

[illegible]

[illegible]

LATEST REVIEWS

Products · Books · Videos [illegible]

New 14xx in 00 from Hornby

[illegible]

[illegible] Mk1s in 4mm scale

[illegible]

Peco private owners in N

[illegible]

Varied selection of new rolling stock in 00 from Hornby

[illegible]

[illegible]

1950s cars in 4mm

[illegible]

Leyland National in 1:150 scale

[illegible]

Limited Edition Class 73...

...and Class 37, both in 00

[illegible]

Welshpool & Llanfair rolling stock in O-16.5 from Dorset Kits

[illegible]

Book Reviews

The Encyclopedia of Modelmaking Techniques

[illegible]

Carriage Modelling Made Easy

[illegible]

Railmodel Digest - 3

[illegible]

Video Reviews

The Ivo Peters Collection

[illegible]

Crewe to Carlisle

[illegible]

NEWSDESK

INFORMATION

Hastington and the Hobby Horse

[illegible]

Modern car kits

[illegible]

Road Radio service

[illegible]

New 7¼" line to open

[illegible]

Class 33 in 0 from Nene Models

[illegible]

News from Crownline

[illegible]

[illegible]

Classroom Corner

[illegible]

Paging Mr Stevens

[illegible]

Norman's 60th

[illegible]

[illegible]

Systems on the move

[illegible]

Chatterley Whitfield Mining Museum

[illegible]

Trolley wagon

[illegible]

[illegible]

New GOG competition

[illegible]

Wrong name

[illegible]

Rodney Pearce

[illegible]

COMMENTARY

The Last Word . . . With Ed Ripley

Against the Grain: CN+IC?

[illegible]

Is Illinois Central ripe for a takeover? Officials are tightlipped, but rumors are rampant.

Rumors that CN was interested in acquiring IC had been circulating since early in the year

[illegible]

[illegible]

[illegible]

EXTINCT!

[illegible]

The Last Word (cont.)

[illegible]

EXCHANGE Classifieds

[illegible]

Classic Rail Blanket

[illegible]

Classic Rail Blanket

CHICAGO CENTRAL

[illegible]

PLETS EXPRESS
The Last Days

PA

Alco's Glamour Girl

[illegible]

Bright sparks

ARISTO-CRAFT TRAINS

STREAMLINE PASSENGER CARS

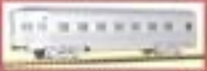
- 1:29 'G' Scale for your #1 Gauge Railroad
- Made from real extruded Aluminum!
- True Indoor / Outdoor Railroading! Weather-proof!
- Available in Coach, Diner, Observation, or Dome!
- Perfect for your Aristo-Craft Alco FA / FB!
- Interior Lighting and Green-Tinted Windows!
- Breathtakingly real and built to last!
- Unbeatable price for a great passenger car!

[illegible]

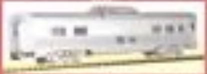
[illegible]	[illegible]
[illegible]	[illegible] - CANADIAN PACIFIC
[illegible] - BALTIMORE & OHIO	[illegible]
[illegible] - N.Y.C. EMPIRE STATE	[illegible] - SOUTHERN PACIFIC
[illegible] - UNION PACIFIC	[illegible] - KATY TEXAS SPECIAL
[illegible] - SANTA FE "SUPER CHIEF"	

[illegible]
346 Bergen Ave., Jersey City, N.J. 07304 USA
[illegible]
[illegible]
E-mail: [illegible]

[illegible] - COACH STREAMLINE PASSENGER



[illegible] STREAMLINE PASSENGER [illegible]



[illegible] - DOME STREAMLINE PASSENGER [illegible]

Knife.

Butter.
The Ultimate Driving Machine

Is your car insurance over £300?

[illegible]

0800 600 800

ADMIRAL

[illegible]

[illegible] MOTOR INSURANCE [illegible]

0800 088 888

[illegible]

STOP

LOOK & LISTEN

[illegible]

0800 00 1066

Hastings [illegible]

PERFORMANCE CAR INSURANCE PHONE

0181-941 1535

HYPERFORMANCE INSURANCE

[illegible]

0181-941 1535

Paying over £300 for your motor insurance?

[illegible]

privilege
INSURANCE

[illegible]

Prestige, executive or performance car?
Are you getting the best mileage from your current insurer?

[illegible]

Bennetts

[illegible]

0990 20 20 90

To find a cheaper car loan, phone for directions.

[illegible]

[illegible]

CONTRACT HIRE

[illegible]

WHEN YOU NEED MORE THAN JUST A CAR

01000 48 28 28 [illegible]

[illegible]

£99.99

STAR★CHIP direct

[illegible]

[illegible]

[illegible]

SPECIALISED CAR COVERS

First

Vehicle Contracts

[illegible]

RING NOW

01656 766677

[illegible]

[illegible]

LOOK AT THESE EXAMPLES

[illegible]

FIRST HOUSE, BRIDGEND, CF31 3AP

[illegible]

A-Z GUIDE TO FRANCHISED DEALERS

[illegible]

AUTOCAR

HOW MUCH, HOW FAST

[illegible]

FOR your nearest Jeep dealer,
call free on 0800 616159

HONDA

Where else?

Citywall

[illegible]

For details of your nearest Official Porsche Centre contact 0800 [illegible]

[illegible]

LEXUS

BUYING TOYOTAS!

[illegible]

Road Test Reprints

PHONE OUR HOTLINE: 01206

[illegible]

[illegible]

[illegible]

Morgan

[illegible]

[illegible]

[illegible]

NOW JUST £8,995

TATA GURKHA

AUTOCAR

Cars for sale

AUTOCAR CARS FOR SALE AUGUST READER OFFER.

Buy your next car and avoid the August jams.

DEALER

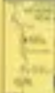
STAMP

Hartwell Audi

Chevin

CAN'T FIND THE AUDI YOU WANT?

Listers Audi



Hunters

Cooper
Bishopsgate

Vines

L&C Croydon

Approved Used Car Special Weekend!

Sat 16th and Sun 17th August
9am - 5pm

0181 288 7777

Burton & Deakin

Barons

Alternatively.... Call Atwood

Atwood

Cheyne

Barons

Cooper

Wanted

BMWs

MLG

M POWER

Castle

Cooper

CAN'T FIND
THE BMW YOU WANT?

New Central
Prophets
Cronk
REST

K. SETO
& CO.

JAGUAR APPROVED USED CARS.

H.A.FOX

HENLYS

H.R. OWEN

Lancaster

Land Rover

Land Rover

CAN'T FIND THE
LAND ROVER YOU WANT?

Park Lane

mazda

MX-6

mazda

MAZDA MX-5s

Evans

0171 435 1152

PENTAGON

CAN'T FIND THE MERCEDES YOU WANT?

[illegible]

Lancaster

[illegible]

CAN'T FIND
THE MERCEDES
YOU WANT?

[illegible]

Lancaster

[illegible]

[illegible]

Official Porsche Centres

When buying a legend be sure of its history.

CAN'T FIND THE PORSCHE YOU WANT?

SCOOP COUPE

TVR

TVR

TVR

The TVR Centre

USED CARS YOU'LL SWEAR ARE NEW CARS

[illegible]

CAN'T FIND THE TOYOTA YOU WANT?

[illegible]

Will you pay too much for your [illegible]

[illegible]

Stock Check

[illegible]

PRE-PURCHASE INSPECTIONS

[illegible]

U.K. MOTOR SERVICES

U.K. MOTOR SERVICES

[illegible]

CAN'T FIND THE QUALITY USED CAR YOU WANT?

[illegible]

SEARCH SERVICE FREEPHONE [illegible]

APPOINTMENTS

[illegible]

WALTEL HERTFORD

SENIOR SERVICE ADVISOR

[illegible]

[illegible]

[illegible]

YOU CAN SELL PREMIER VALUE CARS, BUT CAN YOU SELL COMMERCIAL AIRCRAFT?

[illegible]

[illegible]

[illegible]

[illegible]

TO ADVERTISE IN THE APPOINTMENTS SECTION CALL NATHAN MILLS ON 0181 943 5000

APPOINTMENTS

[illegible]

APPOINTMENTS

[illegible]

[illegible]

[illegible]

SALES EXECUTIVE

[illegible]

Service Technicians

[illegible]

AUTOCAR NEXT ISSUE WEDNESDAY 20TH AUGUST APPOINTMENTS DEADLINE FRIDAY 15TH AUGUST 5.00PM

[illegible]

SALES EXECUTIVE

[illegible]

Attwood

[illegible]

NEXT month in Garden Railways

Kitbash a switcher
A New Bright steamer provides the basis

Whimsy in the garden
Gary Whaley's fanciful engines

Garden railway basics
Site selection for beginners

Railbus
An interesting conversion from a Bachmann streetcar

Radio control
R/C is applied to an Aristo-Craft 4-6-2

What makes a great garden railway?
Bob Kelley gives his opinion

To get your copy of GARDEN RAILWAYS, visit your local hobby shop or newsstand or call

800-446-5489

Visit our web site at
www.gardenrailways.com
Kalmbach Publishing Co.
P.O. Box 1612
Waukesha, WI 53187-1612

Advertiser index

[illegible]

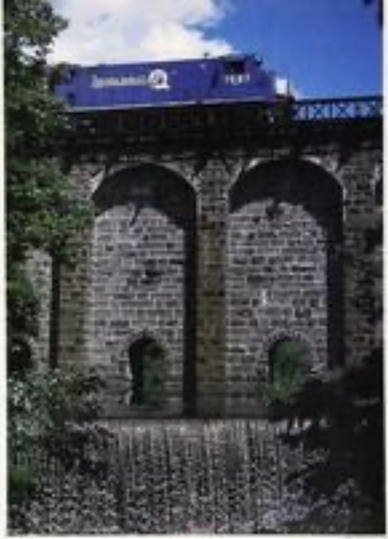


PHOTO FINISH

Built to last

[illegible]

KATO
HO SCALE

NW2 Phase I

NEW Paint Schemes

EMD NW2 Phase I

Available in June

Roadname	Paint Scheme	Engine No.
Santa Fe	"Zebra Stripes" Black & White	2405 2406
Southern Pacific	"Tiger Stripes" Black & Orange	1313 1318

A "heavy-duty" model, ideal for yard or shortline duties, with powerful five-pole motor with flywheel, directional headlight, cab interior and loads of detail. Item numbers 37-1008 – 37-1011 respectively.

ACF 70-Ton Covered Hopper

Available NOW

Roadname	Item No.
Chesapeake & Ohio	38-0101
Union Pacific	38-0102
St. Louis Southwestern	38-0103
Chicago, Burlington & Quincy	38-0104
Erie	38-0105
Santa Fe	38-0106

Models are in kit form, three cars per kit. Assembly by modeler required.

KATO HO PARTS . . . *for upgrades, repairs and kitbashing projects*

HM-5 Motor
Replace with Precision
Double shaft, 9mm.

KATO Knuckle Coupler Coming Soon
Authentic appearance,
semi-automatic operation.

ASF "Ride Control" Trucks
Blackened metal wheels
[illegible]

Barber S-2 Roller Bearing Trucks NEW in July
Wheel hub actually spins
[illegible]

Visit your local hobby shop for these fine products from KATO

KATO U.S.A., INC. · 100 Remington Road · Schaumburg, IL 60173

NEW ATLAS N GP40-2 WITH DCC TECHNOLOGY

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

STOP BY YOUR LOCAL HOBBY DEPOT TO FIND THESE AND MORE GREAT ATLAS PRODUCTS!

DIGITRAX

ATLAS